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Research Report

Avoiding Overcrowding Through Policy Analysis

The Nevada Experience

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Avoiding Overcrowding Through Policy Analysis

The Nevada Experience

by
James Austin

May 1986

National Institute of Justice
James K. Stewart
Director

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Abstract

Many states are facing difficult decisions on how to reform their criminal justice systems. Fueled by public opinion, policy-makers are facing increased pressures to incarcerate more offenders for longer periods of time. Yet, this policy shift is often tempered by the substantial costs of constructing and operating prisons.

This report summarizes the experiences of the Nevada legislature as it struggled to construct an affordable, overall policy responsive to the public. It represents a refreshing approach to policy construction which entails the use of data applied to innovative policy simulation analytic techniques to provide insight on the probable effects of policy reform prior to enactment. Although no fundamental changes were immediately enacted, the results suggest the best policy is to "do nothing" until one is certain of the consequences of reform.

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I. FORECASTING AND CONTROLLING YOUR PRISON POPULATION

Each year, state and local correctional systems are experiencing increased pressures to respond to proposed legislative actions designed to modify current sentencing and release practices. Correctional administrators are asked to precisely estimate within a very short time period, how these reforms will impact the size of their populations (and consequently their operating and capital expenditure budgets) over the immediate and long-term future. Unfortunately, most correctional administrators find themselves ill-equipped to make such estimates with reasonable accuracy. Plagued by incomplete data bases, insufficient staff resources, and simplistic projection technologies, major legislative bills are passed without a clear understanding of how such laws will impact prison, parole, probation, and jail populations as well as public safety. The often unfortunate result is an unexpected overload in selected components of the correctional system (i.e., prison or jail crowding) which, in turn, creates the need for emergency funding, administrative, legislative, or legal actions (e.g., emergency release, temporary housing, etc.).

Despite these problems of the past, there is room for optimism. Sophisticated policy simulation techniques (as described below) are now available that are capable of providing policy-makers with reasonably accurate estimates of how proposed legislation or administrative policies will impact correctional population growth. These models allow policy-makers to modify or abandon proposals if analysis suggests the reform(s) will have adverse budgetary or public safety consequences.

States also are increasingly investing in automated offender based information systems which are needed to better monitor the flow of offenders through the courts and correctional systems. And, objective classification

systems for probation, prison, and parole systems will not only improve the overall efficiency of these correctional systems but will also permit estimations not only of the size of future correctional population, but also of the types of beds (maximum, medium, and minimum security) or levels of supervision each system will require as new policies take effect.

II. BACKGROUND OF THE NEVADA SITUATION

In 1984, Nevada's legislators, correctional administrators, and local criminal justice officials were struggling with fundamental decisions on how best to reform the state's correctional system. Nevada, like most states, was facing a substantial prison overcrowding problem. Ranked number one in 1983 among the states in its prison incarceration rate (354 per 100,000), the state projected a substantial increase in its 3,600 prison population into the next decade which will greatly exceed its current 3,674 bed capacity (BJS, 1984). This increase is being fueled by a rapid increase in the state's at-risk population, a relatively high crime rate, and a declining parole release rate.

During the 1983 legislature, numerous bills were introduced which sought to reform Nevada's sentencing structure to eliminate parole. Bills were also introduced to revise the current good-time credit system which affects the length of time an inmate is incarcerated. However, these bills were not passed for fear that they would greatly worsen the current prison crowding crisis. This flurry of legislative activity dramatized the need for a more coordinated and reasoned approach to adopting new correctional policies.

Aided by funds provided by the National Institute of Justice (NIJ) and the National Institute of Corrections (NIC), a team of researchers and correctional consultants from the American Correctional Association (ACA) and The National Council on Crime and Delinquency (NCCD) assisted a legislatively

mandated (Senate Bill 375) 13 member committee to determine which set of correctional reforms would be most beneficial to the state. Chaired by State Senator Helen Foley, the Committee consisted of six legislators and seven non-voting members representing the state's prison, parole, probation, judges, district attorneys, sheriffs, and parole board agencies. As required by SB 375, the Committee was to review the following areas:

1. The criteria used to grant parole;
2. Good-time credits on terms of imprisonment;
3. The length of time offenders must serve before becoming eligible for parole;
4. The effects that modification or abolition of parole might have on the system of criminal justice in this state;
5. The changes which may be needed in the laws governing sentencing if parole were modified or abolished, including changes in the use of guidelines, sentencing for fixed terms and the creation of a commission on sentencing; and
6. The fiscal effects of abolition or any proposed modification of parole upon: (a) the department of prisons, (b) the department of parole and probation, and (c) the state board of parole commissioners.

The Committee's formation and objectives represented an increasing concern by state officials that no coordinated correctional policy existed and that the costs of Nevada's correctional system were continuing to accelerate at an alarming pace.

The primary tasks of the ACA/NCCD research team was to assist the Committee staff in formulating policy by delivering the following services:

- Provide sub-committee staff with current information on the experiences of other states.
- Provide detailed statistical analysis on current state sentencing and parole practices.
- Conduct simulation analysis on the impact of alternative policies on the prison, parole, and probation populations.

The work of the research team was made increasingly difficult due to a rather short time-line (six months), and, the number and complexity of specific proposals formulated by the Committee. Despite these problems, the research team was able to complete its work as scheduled and significantly impact the overall package adopted by the Committee and submitted to the full legislature this year. What follows is a description of the ACA/NCCD team's methodology and findings provided to the Committee as well as the consequences of this project on policy formation.

III. THE METHOD OF POLICY SIMULATION ANALYSIS (PSA)

Modification of current correctional policy will have effects on four correctional populations:

- Prison
- Parole/Post-Release Supervision
- Probation
- Jail

Consequently, each population must be modelled and understood in relation to how policies affect the flow of offenders through each correctional component. Policy simulation analysis (PSA) simply allows decision-makers to model how changes in one system will impact the entire system. For example, increasing the rate of prison commitments will directly increase the prison population but could also reduce or ease projected jail and probation populations. Depending upon the type of offenders diverted to prison, the characteristics of each population would also change and thus have attending consequences for security, custody, supervision, and programmatic needs. One would also expect an associated increase in the parole population over time as the prison population grows.

To conduct PSA, however, assumes two conditions: (1) the availability of detailed data bases for each population and (2) an analytic capacity using advanced statistical techniques to simulate the flow of offenders through these diverse correctional populations.

A. Required Data

To properly analyze Nevada's court sentencing practices and correctional policy plus the effects of proposed alternative policies, the following data files were created representing the major "states" which govern the flow of offenders:

1. Felony Sentencing Dispositions (Probation, Jail, Prison)
2. Prison Admissions
3. Existing Resident (Stock) Prison Population
4. Prison Releases
5. Parole Board Decisions/Dispositions
6. Existing Parole Population

The nature and application of these data to PSA are described below.

1. Felony Sentencing Dispositions

A major concern has been the extent to which Nevada's criminal courts were sentencing offenders in a fair and consistent manner. Associated with this question of equity was the need to simulate alternative sentencing structures to test the likely impact on prison population growth. A common problem for analyzing sentencing legislation is that no common sample of prisoners and probationers exist. Consequently, when legislation is introduced, for example, requiring mandatory prison terms for residential burglary, it is very difficult to estimate how many burglars now being placed on probation will now go to prison unless a sample of all felony court dispositions are available.

2. Prison Admissions

In addition to the felony sentencing data file, a prison admissions file was also created. Although the information somewhat duplicates data collected from the court, it did provide for a more complete profile on all prison admissions including those re-admitted to prison as parole violators inter-state transfers, or those receiving in Nevada a 120 day pre-sentence commitment for observation purpose (aka "Shock Probation"). These additional types of prison admissions, especially the increasingly large number of parole violators, were not captured on the sentencing file but have obvious important consequences for prison and parole population growth.

3. Existing Resident (Stock) Prison Population

In order to project future population growth it is essential to model how the existing prison population will eventually exit prison and enter parole supervision. Indeed, it is the existing prison (and parole) populations which will have the greatest impact on the next one to two years of population growth. This is especially true for states with indeterminate sentencing and where parole board decision-making will largely govern length of stay for today's inmates. In other words, it is critical to determine at what point the inmates were in their imprisonment. For example, how many inmates had seen the Parole Board, for which hearing (e.g., first, second, or third appearance) and how much time was left until their terms expired irrespective of parole. These kinds of data are necessary for modelling the effects of sentencing or parole legislation which may be retroactive to the existing sentenced population as well as anticipating the flow of inmates from prison to parole on discharge.

4. Prison Releases (Exits)

In Nevada, an inmate's actual length of stay is determined by two major factors: (1) the parole board's decision to grant or deny release and (2) the amount of good-time credits awarded or revoked. Good-time credits also determine the inmate's earliest eligibilty for parole. To learn how many parole hearings inmates typically have, the likelihood of being granted parole at a certain hearing, and the amount of good-time earned or revoked, a sample of recent exits was also required. These data are then applied to the projection model to accurately model the probabilites of inmates (both new intake and existing) being released and their method of release (e.g., parole or straight discharge), and the influence of good-time credits in terms of setting parole hearing dates or a final discharge date if parole is never granted.

5. Parole Board Hearing Data

A significant problem with a prison exit file is that it may only reflect past and not current correctional practices. In other words, the Board may have recently changed its release practices which would not be accurately captured in an exit sample. Consequently, a recent sample of cases heard by the Board was also required.

This file is used for several purposes. First, it provided the Committee with the first systematic analysis of <u>current</u> parole board practices. Second, given the detail of data contained in the file, it is possible to simulate alternative parole release criteria suggested by the Committee or being used by other states. Alternative parole release criteria affect the probabilities of being granted parole at each hearing for the inmate over the course of his/her incarceration. The "new" probabilities can be inserted into the simulation model and used to estimate the impact of such

a policy change on the prison and parole populations. Parole decision-making also includes decisions to revoke parole for technical reasons. If this rate increases, it too will have an associated affect on prison intake and population growth.

6. Parole Population and Exits from Parole

The final piece of required data is the size and characteristics of the parole population and parole exits. We have already highlighted the need to model this population as approximately one-third of this group can be expected to return to prison as technical violators or violators with new sentences within 3 years. By identifying the size of this population and where they are in terms of time until discharge, one can approximate how many will fail or succeed on parole by using the revocation rates generated from the parole board decision-making data file.

B. THE POLICY SIMULATION MODEL

The computerized projection model used for Nevada was developed by NCCD and is an example of what is sometimes called stochastic entity simulation models.* This model was first used in California in 1978 in response to that state's shift from indeterminate to determinate. Since then it has been installed in four other states (Nevada, Illinois, Ohio, Louisiana). It is stochastic or probabilistic in the sense that random numbers are used in the process, and an entity simulation in the sense that the model is conceptually designed around the movement of individuals through the prison and parole systems. Probability distributions of over 80 variables are used to mimic the flow of offenders through prison, parole, and even probation.

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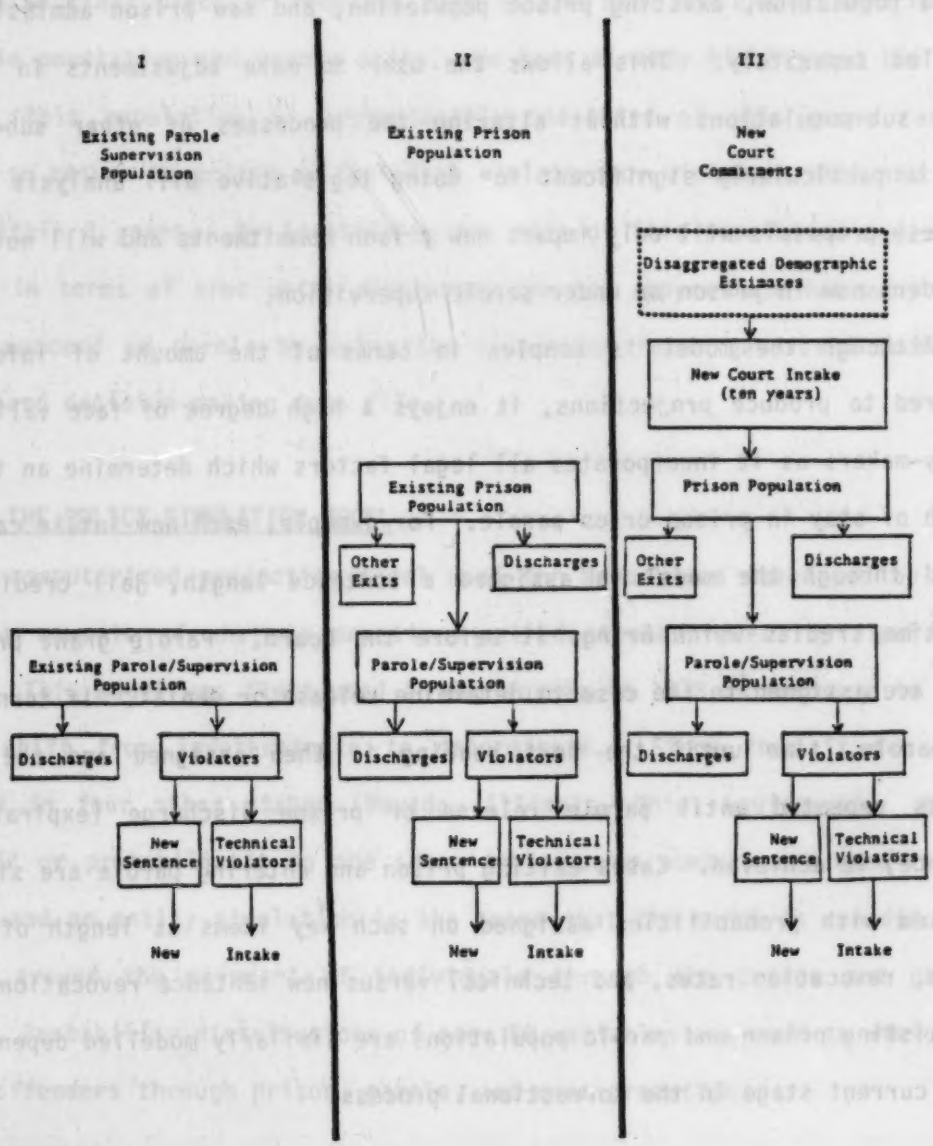
* A more detailed description of the technical properties of the model is available from NCCD upon request.

The prison and parole populations at any point in future time are comprised of two components: (1) that due to the last known existing prison and parole populations and (2) that due to persons entering prison in the following or future time. The model, therefore, treats these components separately as illustrated in Exhibit A. Here, one can see that the existing parole population, existing prison population, and new prison admissions are modelled separately. This allows the user to make adjustments in each of these sub-populations without altering the processes of other sub-groups. This is particularly significant for doing legislative bill analysis as many of these proposals will only impact new prison commitments and will not affect offenders now in prison or under parole supervision.

Although the model is complex in terms of the amount of information required to produce projections, it enjoys a high degree of face validity to policy-makers as it incorporates all legal factors which determine an inmate's length of stay in prison or on parole. For example, each new intake case processed through the model is assigned a sentence length, jail credits, and good-time credits which brings it before the Board. Parole grant probabilities are assigned to the case to determine release or denial. If turned down for parole, time until the next hearing is then assigned and the parole process repeated until parole release or prison discharge (expiration of sentence) is achieved. Cases exiting prison and entering parole are similarly modelled with probabilities assigned on such key items as length of supervision, revocation rates, and technical versus new sentence revocations. Both the existing prison and parole populations are similarly modelled depending on their current stage in the correctional process.

Exhibit A

NCCD Prison and Parole Population Disaggregated Simulation Model Conceptual Design



Annual admission numbers are estimated for ten years using a disaggregated demographic technique developed by Blumstein (1980) and loaded into the new intake component of the model. Because certain sex, age, and ethnic groups are known to have high incarceration rates, it is essential to know to what extent these "at risk" demographic groups will grow. Nevada is a growth state and expected to increase its state population substantially over the next decade.

In summary, the model attempts to replicate on computer, the actual flow of offenders. It is, therefore, extremely useful for legislative applications. As policies are proposed which seek to restrict or expand probabilities in sentence length, good-time credits, or parole for specific offender groups, these proposals can be quickly tested by altering the model's current probabilities which mirror current practices. In this sense, the model is extremely sensitive to policy which fundamentally determines future correctional population size.

IV. ANALYSIS OF NEVADA'S CURRENT PRACTICES

A. Sentencing Practices

Two areas of sentencing practices were analyzed for the Committee: (1) disposition rates and (2) sentence length. The researchers were specifically directed to examine the extent of disparity that might exist within these two measures among Nevada's 9 district courts.

With regard to disposition rates, it was found that forty-two percent of all Nevada felony court convictions are sentenced to prison (Table 1). Although no national data exists to evaluate how high this rate is with other states, available data from four other states show this is a comparatively higher rate.

TABLE 1

FY 1984 FELONY CONVICTIONS RESULTING IN PRISON BY NEVADA'S DISTRICT COURTS*

District Court	N	%
1	26	42.6%
2 (Reno)	144	39.1%
3	17	40.5%
4	11	32.4%
5	11	57.9%
6	9	47.4%
7	7	58.3%
8 (Las Vegas)	377	43.3%
9	31	73.8%
TOTAL	633	41.5%

COMPARED TO OTHER STATES

Nevada (1983)	42%
Illinois (1982)	38%
California (1982)	33%
Minnesota (1983)	22%
Washington (1983)	20%

* Reflects all felony court dispositions as documented on the Nevada Parole and Probation automated system July 1, 1983 - March 30, 1985.

When examining prison disposition rates by each of the nine district courts, two findings stand out. First, two districts (Clark and Washoe representing the Reno and Las Vegas metropolitan areas) account for 82 percent of all prison commitments occurring in felony cases. Second, considerable disparity exists among the districts in their prison disposition rates. In particular, some of the smaller district courts have very high prison disposition rates, but these differences are somewhat tempered by the relatively high numbers of cases processed by Clark and Washoe.

The next step was to determine the extent of variation in sentence lengths among Nevada's Courts. And, a considerable range in sentence lengths was found (See Table 2). However, as with analysis of court dispositions, these differences may be legitimate if differences among the courts in offenders' characteristics or differences in the types of criminal cases coming before the district courts exist.

To explore these issues more carefully the district courts were grouped into two categories:

1. Low sentence district courts (i.e., districts where the median sentence length was below the State's median sentence length).
2. High sentence district courts (i.e., districts where the median sentence length was above the State's median sentence length).

As a further control measure, median sentence lengths by the major criminal offenses for both the high and low districts were produced (see Table 3). This analysis revealed that, the low districts continued to show significantly lower sentence length even when controlling for offense type. These differences persist even after additional analyses were done controlling for the prior criminal histories of individual cases processed through the courts.*

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* More elaborate controlled analyses were also done including prior record variables and with similar results.

TABLE 2

FY 1984 NEVADA PRISON SENTENCE LENGTHS BY DISTRICT COURT

Nevada District Court	N	Median (Mos.)	Mean (Mos.)	Mode (Mos.)	Death/Life N	Death/Life %
1	26	54	78	36	(2)	8%
2	144	36	57	36	(3)	19%
3	17	36	48	36	(0)	-
4	11	24	51	24	(1)	9%
5	11	36	53	36	(2)	18%
6	9	60	83	60	(0)	-
7	7	37	44	12	(1)	14%
8	377	60	81	36	(31)	8%
9	31	24	51	12	(2)	6%
TOTAL	633	48	72	36	(42)	7%

TABLE 3

MEDIAN PRISON SENTENCE LENGTH BY COURT DISTRICT BY OFFENSE

Offense	Low Districts(1) (months)	High Districts (2) (months)
Murder	192	240
Manslaughter	102	78
Rape	87	162
Robbery	72	120
Assault	36	72
Burglary	36	48
Larceny Theft	12	36
Forgery	21	36
Fraud	18	36
Drugs	24	48

(1) District Courts 2, 3, 4, 5, 7, and 9.

(2) District Courts 1, 6 and 8.

These simple findings led the Committee to consider adoption of sentencing guidelines which would provide more structure and certainty in sentencing practices and ensure that dangerous offenders were being sentenced to prison and non-dangerous offenders received shorter sentences or probation terms.

B. Parole Board Practices

The likelihood of an inmate receiving parole has decreased substantially since 1979 when 60 percent of all the Board's hearings resulted in parole being granted. Currently, about 15 percent of all parole hearings result in the Board granting an inmate unconditional parole within Nevada (see Table 4). The total parole grant rate is actually 34 percent but this statistic includes several options which do not translate into actual release from prison.

Thus, the most predictable decision of the Board is denial. Fifty-one percent of all decisions result in a flat denial and an additional 13 percent are denials with no further hearings scheduled (i.e., expiration of sentence will occur prior to an additional hearing being scheduled). If the Board continues its current trend of decreasing parole grants, one can expect the frequency of sentence expirations to increase substantially as well as the prison population over the next few years.

Why had parole practices shifted so dramatically? A primary factor was increasing public opinion against what the public perceives as an overly lenient criminal justice system. As these pressures build, Parole Boards in particular are easy targets for criticism. Consequently, Board members who are appointed via the Governor face increasing demands to demonstrate their "toughness" toward inmates eligible for release. However, an important consequence of their actions was a spiraling prison populations beyond what the state had projected.

TABLE 4

1983 PAROLE BOARD DECISIONS FOR ALL HEARINGS*

	N	Percent
	(463)	(100.0%)
DENIED		
To Next Hearing	235	50.6
Expiration of Sentence	62	13.4
Inmate's Request	8	1.7
GRANTED		
To Consecutive Sentences	30	6.5
To Other State	46	9.9
To Hold/Detainer	13	2.8
Unconditional Parole	69	14.9
TOTAL Parole Rate	158	34.2

* Represents a one-third systematic random sample of all 1983 parole hearings and January and February, 1984 hearings

This trend led the Committee to consider adoption of parole guidelines based on risk factors as well as the severity of the offense. The Committee's hope was that guidelines would increase the probability of parole for low risk offenders and ensure longer terms for high risk offenders. Such a selective risk model would instill greater confidence in the Board's work and possibly produce substantial cost savings without greatly aggravating public safety.

V. RESULTS OF POLICY SIMULATIONS

The Committee then began a careful process of drafting a number of proposals which would result in the adoption of sentencing and/or parole guidelines. These guidelines represented models adopted in other states which serve to lengthen prison terms for offenders convicted of violent crimes and either reduce terms or divert from prison those offenders viewed as non-violent or low risk to public safety.

In total, over twenty legislative proposals were "tested" via the simulation model to measure their impact on the correctional system. At the close of the Committee's work, only one major reform package remained which the Committee eventually recommended to the full legislature in 1985 representing changes in sentencing, parole, and good-time credits. The specifics of the major proposals tested and the results of the simulation analyses are described below.

A. Current Projection and Assumptions

The first step was to provide the Committee with a revised projection reflecting current sentencing and parole practices. NCCD last completed a base projection for Nevada as part of a 1982 Prison Masterplan study. Although that projection proved to be quite accurate for the two following years, it now had to be modified due to the decreasing rate of parole. Also,

sentencing practices had changed slightly, affecting the number of admissions each year as well as sentence lengths.

The updated projection had the following two major assumptions:

1. Annual admission growth rate of 4 percent for new prison commitments from court.
2. Reduced parole probabilities of 26 percent at Hearing 1; 41 percent at Hearing 2; 42 percent at Hearings 3 and 4; and 50 percent at all subsequent parole hearings.

This projection was substantially higher than the 1982 projection and estimated that the state's prison population will grow to 7,000 by FY 1992-1993 if sentencing and parole practices remain constant. The substantial increase over the 1982 projection principally reflected the greater restriction of parole which begins to have major effects in FY 1988-1989. In the 1982 projection, the parole probabilities were substantially higher (i.e., 30 percent at Hearing I; 60 percent at Hearing 2; 90 percent at Hearing 3; 95 percent at Hearing 4; and 99 percent at Hearing 5). If the current parole policy remains in effect throughout the decade, inmates with long sentences will begin to increasingly stack-up over the decade and have substantial consequences for prison population growth.

B. Alternative Sentencing Guideline Models

Sentencing reforms primarily impact the number of offenders committed to prison and the sentence lengths handed out by the court. In the course of the Committee's public hearings, testimony was heard from a number of experts from other state and Federal agencies on how they had reformed their sentencing systems. The Committee was especially interested in the Minnesota Sentencing Guidelines model which had successfully controlled population growth and reduced disparity. This model relies principally on two factors to sentence convicted felons: (1) current offense category and (2) prior convictions.

In terms of computer simulation, it was possible to estimate what impact this model would have on Nevada's sentencing practices by applying the model's criteria to Nevada's convicted felon population. The principle purpose of this simulation was to estimate how the Minnesota model would alter the current prison disposition rate of 42 percent as reported earlier.

Initial results reveal that if Nevada fully adopted the Minnesota model, it would reduce the prison disposition rate to 27 percent. Some committee staff felt this was too low and requested a more moderate rate of 35 percent be used as a Nevada version of the Guidelines model. This was done by slightly increasing the guideline for a few of the property offenders with less severe criminal histories. As also shown in Table 5, adoption of this sentencing guideline criteria on July 1, 1987 would produce a declining rate of growth by FY 1988-1989.

Three technical points should be noted here. First, it was assumed that the sentencing law would not take effect until July 1, 1987 and that there would be a time lag of six months before the first noticeable change in actual prison admissions would be apparent. Second, the law would not be retroactive to the existing felon population. And third, the current parole board system and sentencing system would remain in effect, including current parole release probabilities. In actuality, both the sentence length and parole function would likely be changed substantially if the State were to adopt a determinate sentencing structure like Minnesota. However, at this time, it was not possible to estimate the extent of these changes. By maintaining current sentence length and parole probabilities, these projections assume that the current length of stay in prison would remain constant.

TABLE 5

SUMMARY OF MAJOR POLICY SIMULATIONS
PRISON POPULATIONS

Fiscal Year	1982 Projection	1984 Projection	Sentencing Guidelines	Parole Guidelines	Combined Sent./Parole Guidelines
83-					
84-					
85-86	4025	4075	4075	3875	3875
86-87	4450	4450	4450	3825	3825
87-88	4750	4875	4825	4100	3950
88-89	4975	5325	5025	4475	4125
89-90	5350	5725	5275	4975	4525
90-91	5575	6225	5500	5475	4825
91-92	N/A	6600	5800	5900	5175
92-93	N/A	7000	6100	6300	5575

C. Alternative Parole Policies

Three specific policy options were proposed in the area of parole guidelines. The first option was to abolish parole and require all inmates committed to prison after July 1, 1985 to serve their full terms in prison less statutory and special work credits earned while incarcerated. This policy was quickly rejected by the Committee after the simulation analysis showed the prison population would increase to over 9,000 by FY 1993 if enacted in FY 1985. The Committee then proceeded to consider two guideline models. The first was a parole guideline model now being used by the Pennsylvania Board of Probation and Parole. Pennsylvania's model is, in part, a predictive model which uses factors found to be related to actual parole performance. Furthermore, the model is highly structured and uses a numerical scoring matrix to determine risk level. The Board may deviate from an inmate's designated score only if a written explanation is provided justifying the exception to policy. It should also be added that almost 80 percent of the cases appearing before the Pennsylvania Board are paroled. Furthermore, over 81 percent of offenders released on parole are not recommitted to prison or abscond supervision after a one year follow-up suggesting the model is fairly successful in identifying the low and high risk candidates for release.

Not unexpectedly, analysis indicates that if Nevada adopted the Pennsylvania approach the probabilities of being granted parole would increase substantially to a level approaching 72 percent. This rate was calculated by applying the Pennsylvania factors to the sample of Nevada inmates appearing before the Nevada Parole Board.

This rate was viewed by committee members as excessively high which led them to a second parole release criteria as follows.

Class I Property Offender - No Prior Felony Convictions (High Probability)

Class II Property Offender - Prior Felony Conviction(s) (Moderate Probabilty)

Class III Violent Offender - No Prior Felony Conviction (Low Probability)

Class IV Violent Offender - Prior Felony Conviction (Minimal Probability)

Using this criteria composite rates of 50 percent for Hearing I, 65 percent for Hearing 2, 75 percent for Hearing 3, 77 percent for Hearing 4, and 79 percent for Hearing 5 and beyond were inserted into the model. It was also assumed that the guidelines would not take effect until January 1, 1986 but would be retroactive to the current inmate population. If adopted in this manner, the prison population growth would slow in Fiscal Year 1985-1986 and ultimately reduce the population by 700 by 1993 (Table 5).

D. Combining Sentencing, Parole, and Good-Time Policies

The final projection produced for the Committee took into account the simultaneous effects of adopting sentencing, parole, and good-time policy reforms. Such a simulation would allow the Committee to estimate the interactive effects of policies introduced over a staggered time period and affecting both the rate of admissions to prison and prison terms.

The one combination which the Committee finally agreed upon was the Nevada version of sentencing guidelines, a parole guideline model, and a revised good-time policy which would make it slightly more difficult for inmates to earn good-time unless they were actively involved in prison work and program activities. The final projection, also shown in Table 5, assumes the following:

- Parole guidelines take effect January 1, 1986 and are retroactive to the current population.

- Sentencing guidelines take effect July 1, 1987 with a six month lag factor and not retroactive to the current population.
- New good-time policies take effect July 1, 1985 and not retroactive to the current population.

If such a major policy change would be implemented according to these assumptions, it would reduce the current projection by 1,425 by FY 1993.

VI. IMPACT OF POLICY SIMULATION ON PAROLE, PROBATION, AND PRISON SECURITY NEEDS

Reforms which will modify the number of offenders sentenced to prison and release practice also will have secondary effects on probation and parole populations. In the case of Nevada, the major reforms being considered would accelerate the numbers of offenders being placed both on probation and on parole. These secondary effects must be accounted for to accurately estimate the additional costs of managing a larger community correctional population. One can also anticipate that as more selective sentencing and parole release guideline models are implemented, changes in the characteristics of the prison population will also evolve. These changes will inevitably alter the security needs of the prison population toward the higher classification levels.*

A. Parole Population Estimates

Both current parole population estimates as well as those representing the adoption of parole or sentencing guidelines (or both) are shown in Table 6. If only the sentencing guidelines model is adopted, a slight reduction in the state's parole population will begin in FY 1988-1989. The reduc-

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* One could also argue that similar classification changes will develop for probation and parole populations as different types of offenders are channeled by the court and the Parole Board. However, since classification data do not exist for probation and parole, this kind of analysis could not be done for these non-prison populations.

tion is small for two reasons. First, the Board is already quite restrictive in its use of parole. Sentencing guidelines will serve principally to divert the number of offenders committed to prison but not necessarily increase parole rates. Second, sentencing guidelines would not be adopted until July 1, 1987, with the first observable change in prison admissions unlikely to occur until January, 1988. And, it will be 1-2 years before a large number of these new prison admissions begin appearing before the Board further diluting the immediate impact on parole population size.

Conversely, adoption only of the parole guidelines model would increase the parole rate for all inmates beginning in FY 1985-1986. The parole population is thus expected to increase by 400 to 1,375 by July, 1993. However, if one adopts both reforms, the projected parole population will be reduced to 1,175 by June 30, 1993 reflecting the countervailling effects of a reduced prison admissions and an increased paroles.

B. Probation Population Estimates

Unlike the parole population estimates, the current projection model does not produce probation population estimates.* Consequently, determining how the probation population would be affected by proposed reforms is more tenuous. However, it was possible to provide gross estimates on the expected direction and magnitude of the changes using rather straightforward statistical procedures.

At the outset, reforms affecting parole release rates can effectively be discounted from this discussion as they will have minimal impact on probation population. The only possible impact would be a slight increase in probation

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* Such a component has been installed for Louisiana which has a state probation system as well as a comprehensive data base.

if one assumes that by increasing the number of offenders released on parole, a high number of parolees discharged from parole supervision would be eligible to commit additional crimes and thus be placed on probation (or recommitted to prison). However, such estimates are quite speculative.

The primary reform likely to impact probation populations is the sentencing guideline model which would divert 17 percent of the current prison admission population to probation. Although precise estimates can be made of how this reform will increase probation commitments, there is little data for estimating the projected length of probation supervision. Probation officials did report that felony probationers spend approximately 24 months on supervision. Using this estimated length of stay with the projected increase in probation commitments beginning January 1, 1988, one can calculate the expected additional growth in the probation population also shown in Table 6.

C. Impact on Prison Security Needs

Finally, estimates were made on how these reforms would affect the security needs of the residual prison population. Under ideal circumstances, a more sophisticated methodology than presented here should be used to provide more precise estimates. Such a methodology requires the existence of an objective prison classification point system which allows computations of transitional probabilities of security needs (maximum, medium, minimum) from initial classification through prison exit. These probabilities can then be applied to a Markov chain formula to estimate resident population custody needs (see NCCD, 1984). In Nevada, we had to rely upon NCCD's previous masterplan study (1983) which estimated inmate custody levels at initial classification. Since most inmates have their custody levels reduced over time, this approach and the following estimates are then believed to be conservative estimates of actual classification levels.

As with the probation estimates, the primary reform to be analyzed would be sentencing guidelines as it would have the most direct impact on the number and type of offenders committed to prison. Consequently, the 17 percent reduction in prison admissions is assumed to only represent inmates who would be classified for minimum security by virtue of their current offense and prior record characteristics. These two classification variables have been shown in a previous Nevada study to be the most significant factors in determining an inmate's security level (Austin, 1983).

Applying these assumptions to the classification projections reduces the number of minimum security inmates admitted to prison by 38 percent. Furthermore, by applying the estimated length of stay for minimum security inmates to the reduced number of minimum security admissions while holding constant the estimated number of admissions and length of stay for medium and maximum security inmates, one can estimate the following new classification levels for the prison system (Table 7). These changes would not begin until FY 1987-88 and be fully felt by FY 1988-1989 reflecting the gradual trickling of less serious offenders from the prison to probation.

VII. THE COST OF REFORM

As each of the above estimates were produced, the state's legislature analyst division developed associated costs estimates for each policy option. In many ways this last component of the analysis was the most important as Committee were especially interested in controlling the state's criminal justice costs.

There is not sufficient space to detail the accounting methods by which those costs were calculated. Indeed, much theoretical work remains to be done in this area of cost projection. However, the legislative analyst staff did

TABLE 6

PAROLE AND PROBATION PROJECTIONS

	Parole Populations				Probation Populations	
FY	Current	Nevada Sentencing	Nevada Parole	Nevada Sentencing/Parole	Current	Nevada Sentencing/Parole
83-84	675	675	675	675	2325	2325
84-85	725	725	725	725	2425	2425
85-86	750	750	825	750	2525	2525
86-87	800	775	1075	1075	2625	2625
87-88	825	800	1150	1100	2725	3025
88-89	850	825	1225	1125	2825	3425
89-90	900	825	1275	1125	2950	3550
90-91	925	850	1325	1150	3075	3700
91-92	950	850	1350	1150	3175	3850
92-93	975	875	1375	1175	3325	4000

TABLE 7

IMPACT OF SENTENCING GUIDELINES ON PRISON POPULATION SECURITY LEVELS

Security Level	Current	With Sentencing Guideline
Maximum	10.5%	12.4%
Medium	50.9%	59.7%
Minimum	38.5%	27.9%

separate their costs according to construction as well as operating costs for each policy option.

These costs, as summarized in Table 8, dramatize the importance of these policy options in terms of future allocations of the state's fiscal resources. If no policy changes occur (option 1), the state will need to construct an additional 3,000 prison beds at costs exceeding $141 million. Conversely, adoption of either sentencing guidelines or parole guidelines or a combination of both would produce savings in excess of $20 - $37 million to the state.

VIII. EPILOGUE

The findings of this study dramatized to the Nevada legislature that the choices it makes to reform sentencing, parole, and correctional policies will have much to do with the size, cost, and effectiveness of the state's correctional system. The graphs shown in Exhibit B illustrate how large the "window" of growth is for prisons, parole, and probation relative to policy options reviewed by Nevada's policy-makers. If the legislature proceeds to enact some of these new policies, careful attention must be made to the exact language of each reform; for, as the structure and assumptions change for each reform, so too will the estimates of correctional populations and costs.

The approach used for Nevada represents a simple point of departure for more refined and comprehensive policy studies. As states develop more complete data bases, it will be possible to model not only jail populations, but also the entire pretrial and court disposition processes. And, as our knowledge of criminal behavior and the effects of various court interventions are measured, one could even begin to estimate the relative costs of various policy options on public safety and associated economic losses.

As a direct result of this Committee's work, a Sentencing Commission was established to make more specific recommendations on sentencing reform. And,

TABLE 8

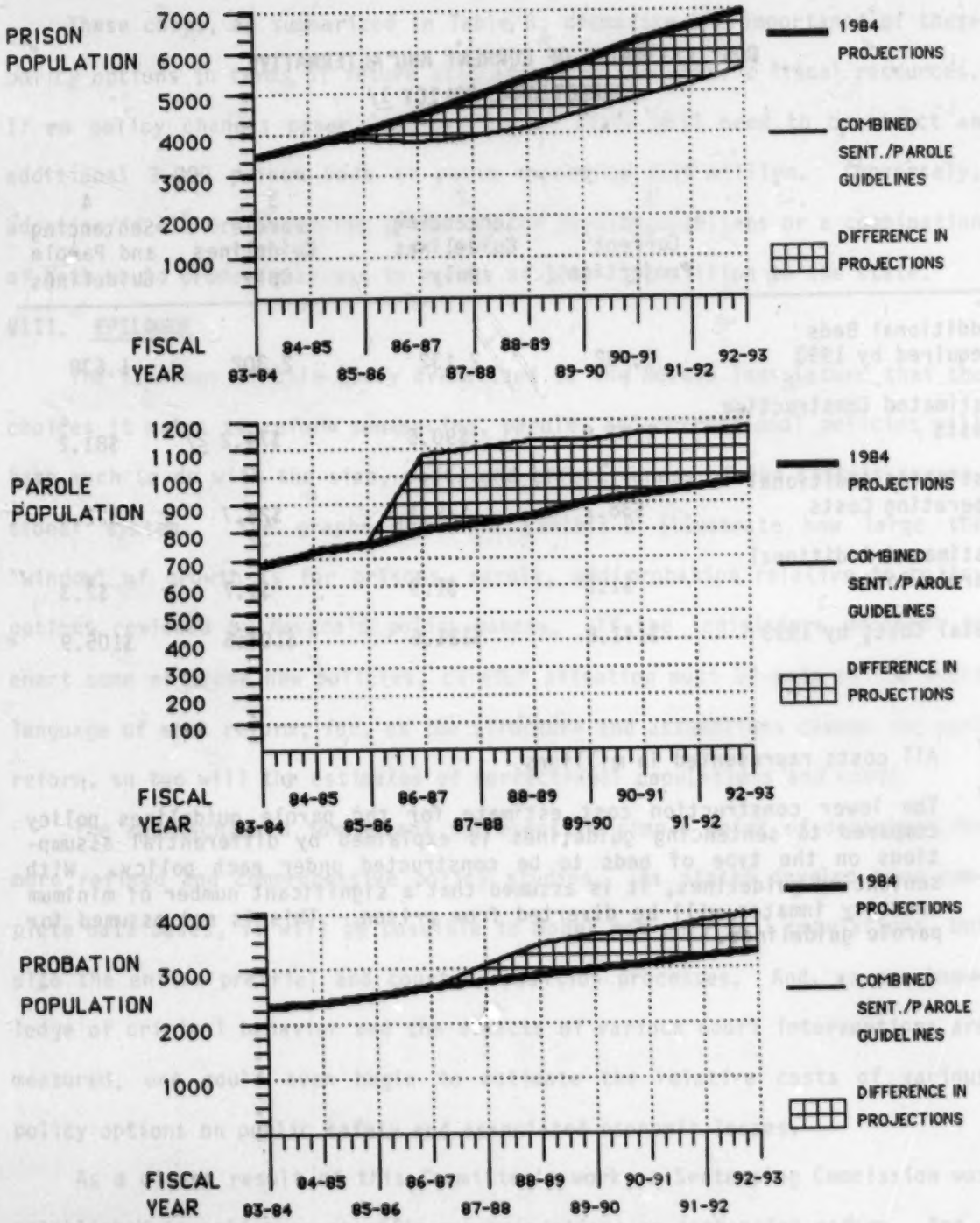
COST ESTIMATES OF CURRENT AND ALTERNATIVE CORRECTIONAL POLICY 1/

	1 Current Projection	2 Sentencing Guidelines Only	3 Parole Guidelines Only	4 Sentencing and Parole Guidelines
Additional Beds Required by 1993	2,992	2,132	2,302	1,638
Estimated Construction Costs	$101.8	$90.6	$74.2 2/	$81.2
Estimated Additional Operating Costs	$38.7	$29.1	$28.7	$22.4
Estimated Additional Parole Costs	$1.3	$1.9	$1.7	$2.3
Total Costs by 1993	$141.8	$121.6	$104.6	$105.9

1/ All costs represented in millions.

2/ The lower construction cost estimate for the parole guidelines policy compared to sentencing guidelines is explained by differential assumptions on the type of beds to be constructed under each policy. With sentencing guidelines, it is assumed that a significant number of minimum security inmates will be diverted from prison. This is not assumed for parole guidelines.

EXHIBIT B


PRISON POPULATION
7000
6000
5000
4000
3000
2000
1000
FISCAL YEAR
83-84
84-85
85-86
86-87
87-88
88-89
89-90
90-91
91-92
92-93
1984 PROJECTIONS
COMBINED SENT./PAROLE GUIDELINES
DIFFERENCE IN PROJECTIONS
PAROLE POPULATION
1200
1100
1000
900
800
700
600
500
400
300
200
100
FISCAL YEAR
83-84
84-85
85-86
86-87
87-88
88-89
89-90
90-91
91-92
92-93
1984 PROJECTIONS
COMBINED SENT./PAROLE GUIDELINES
DIFFERENCE IN PROJECTIONS
PROBATION POPULATION
4000
3000
2000
1000
FISCAL YEAR
83-84
84-85
85-86
86-87
87-88
88-89
89-90
90-91
91-92
92-93
1984 PROJECTIONS
COMBINED SENT./PAROLE GUIDELINES
DIFFERENCE IN PROJECTIONS

the Parole Board has adopted in principal the need for more structured guidelines based on risk assessment. Although no immediate changes have occurred thus far, the state is moving toward a process of carefully reviewing the impact of possible options. If nothing else, the state has embraced a policy of doing nothing until it knows the likely consequences of policy reform.

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